**PFC2 Chapter 18 Section 1 Guided Reading**

1. Define harmonic motion and give an example.
2. Describe one cycle of a merry-go-round’s harmonic motion.
3. What is an oscillator?
4. Explain the difference between the terms *vibration* and *oscillation* in physics.
5. Name two oscillating systems of which Earth is a part.
6. The time for one cycle to occur is known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an oscillating system.
7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the number of cycles per second.
8. The unit of one cycle per second is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. Write the equations for period and frequency. Label each variable in the equations as shown on page 429.
10. Do the Your Turn problems on page 429. Show your work. Check your solutions against the answers provided at the end of the chapter.
11. The maximum distance from the equilibrium position in harmonic motion is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an oscillator.
12. What is meant by the “damping” of an oscillator?